India generates 62 million tonnes of municipal solid waste every year. Less than 60% of this waste is collected, of which only 15% is processed. Even though India has progressive waste management rules and regulations which support the decentralised waste management system and integration of the informal sector, the situation on the ground is far from satisfactory. Around 40% of the waste generated ends up either being burnt or dumped in open water bodies and landfills. A large percentage of people involved in waste management work informally and are from low-income households inflicted by poverty, malnourishment and often working in poor health and safety conditions.

Saahas Zero Waste Management Pvt. Ltd with its brand, Saahas Zero Waste (SZW) is focused on resource recovery. The company looks at recovery of up to 98% of all resources recovered from wet and dry recyclable waste. This is enabled through decentralized waste systems where the company has set up on-site facilities to ensure segregation at source and processing of waste as close to the source as possible. The business model includes revenues from waste and a service fee. These two sources of revenue make it possible for recovery of waste which has low or negative economic value and also provides jobs that pay at least minimum wages to the field team, most of whom are women from base of the pyramid (BoP) households. At the same time, the company has introduced intensive processes and technology that are serviced and monitored by professionals with skills in this area. The company is based in Bengaluru and is also operating service lines across the country as it moves to become a pan-India organization.

SZW implements four business strategies aligned with principles of circular economy:

1. **Zero Waste Programme for Bulk Waste Generators:** Segregating waste at source, on-site management of biodegradable waste and transportation of other streams of municipal solid waste to a material recovery facility where the waste is further sorted into multiple categories, aggregated and then dispatched to appropriate recycling facilities and co-processing units.

2. **Assisting Companies to Comply with Extended Producer Responsibility (EPR) Programme:** Enabling manufacturers and brand owners of electronic goods and plastic packaging to channel plastic waste and e-waste and ensure environmentally sound management.
3. **Products:** To close the loop on waste management and recovery, SZW collaborates with third party partners to manufacture products out of different waste streams such as paper, Tetra Pak, aluminum, PET bottles and plastic. The current products portfolio includes stationery, chipboards, roofing sheets, clothing etc. and these are sold to various types of end-customers such as companies, educational institutions and individuals.

4. **Consulting:** SZW consults companies and brands to help meet their sustainable development goals and works with governmental authorities for preparing policy and regulatory framework on waste management. SZW also works towards raising awareness and building capacities of different stakeholders in the waste value chain for building more resilient waste management systems.

While the informal sector in India plays a critical role in collection and bringing recyclables into the value chain, they have little or no access to minimum wages, social security benefits or personal protective equipment. Moreover, safety, health and environmental standards are not adhered to in most workplaces. In contrast, SZW provides each employee with a reliable salary, healthcare, pension, insurance benefits, and an opportunity to build new skills and knowledge. The company emphasizes a safe and dignified work environment with adequate protective gear and training for hygienic waste handling practices.

SZW directly employs people, especially women, from BoP households for its operations, on permanent employment contracts with decent wage and benefits, and puts in place well-being, health, safety and environmental policies to ensure accountability. For example, SZW has a policy and committee in place for addressing instances of sexual harassment at the workplace. Similarly, all transactions with its informal partners are carried out through banking channels to ensure transparency and to mitigate the risk of exploitation. Through its business model, SZW ensures compliance with the law, sustainable and safe livelihoods and positive contribution to health and environmental outcomes.

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**Key Stakeholders**

SZW employs 304 people out of which 252 are from low-income households. The company also indirectly creates livelihoods for more than 1,900 individuals across 25 locations who are engaged in the supply chain as micro-entrepreneurs and logistic partners.
1. Assessing Readiness and Capacity

SZW joined BCtA’s Impact Champions Programme to develop a comprehensive framework for impact measurement and management that would allow them to regularly collect direct feedback from their stakeholders to assess and improve products, services and operations.

At the start of the Impact Champions Programme, SZW was found to have an advanced capacity for undertaking impact measurement and management. This is because the company’s senior managers view social impact management as a critical activity and can devote time to supervise it. They have some experience collecting and reporting on non-financial data as part of regular monitoring of key performance indicators. Moreover, SZW uses web-based tools, laptops, smartphones and Enterprise Resource Planning software. The company’s senior managers are strongly committed to dedicate time and carry out impact management. Lastly, SZW staff regularly collect and use data for their daily operations and can dedicate some of their time for impact management.

2. Planning For Impact

1. Impact Value Chain

The Impact Value Chain is a visual map of how an organization’s strategy and operations contribute to its business value and the Sustainable Development Goals (SDGs). The Impact Value Chain allows the organization to holistically understand the effects of its inclusive business activities on different groups and the environment.

SZW identified several problems and opportunities such as the fact that bulk waste generators do not pursue responsible waste management and are not held accountable for widespread waste disposal. Moreover, the waste management industry has predominantly poor working conditions, informal work and low wages. SZW also wants to focus on improving transparency amongst waste generators and enforcing implementation of government policies.

SZW is addressing these issues by engaging with bulk waste generators and local authorities to develop de-centralised end-to-end waste management services. The company is establishing a traceable waste handling supply chain and scaling up infrastructure to cater to the volumes of waste generated. SZW is implementing the polluter-pay principle by introducing service fees which make up 84% of its total revenues. SZW also provides formal employment ensuring hygienic and safe working conditions with equal opportunities for women.

As a result of these activities, they have developed an ecosystem for a transparent and traceable waste management industry where waste management is becoming more viable and there is more accountability from waste generators.

SZW’s long-term environmental goals include zero waste management, restoration of natural resources, a fully formalized waste ecosystem, reduced carbon emissions and a move towards a circular economy through maximum waste recovery. Moreover, SZW contributes to dignified livelihood and gender equality for workers in the waste industry.
SZW tracks the performance of its inputs, outputs, outcomes and impact goals using the following framework:

**SZW’s Impact Value Chain**

### Problems & Opportunities
- Bulk waste generators, including brands and producers are not held accountable for waste generated (give low importance to responsible waste management practices).
- Waste disposal has precedence over holistic waste management and hence not perceived as an essential service. (Waste management needs to be scaled up through a viable business model).
- Poor implementation of government policies across waste generators and lack of transparency.
- Social stigma around waste management (poor working conditions, inequal conditions for women and being an informal industry are some of the reasons why this industry has been neglected for so long).

### Inputs/Activities
- Sensitisation among waste generators on responsible waste management practices.
- Establish a traceable waste handling supply chain.
- Scale-up infrastructure to meet the scale of waste generation.
- Implement the polluter-pays principle through a service fee.
- Local authorities to adopt holistic end-to-end solutions.
- Provide hygienic and safe working conditions.
- Provide equal opportunities to women at the workplace.
- Implement full formalisation of the supply chain through self-sustained social inclusion models.
- Create job opportunities for professional to integrate to waste ecosystem.

### Outputs
- Better segregation and collection from the source.
- Added accountability of waste generators.
- Increase waste handling capacities to process waste at source.
- Helps in viability to manage waste responsibly.
- Dignity of labour leading to job satisfaction.
- Increase of women participation in the workforce.
- Enables an ethical supply chain with full compliance.

### Outcomes
- Prevents leakages of waste into water bodies.
- Prevents dumping or burning of waste.
- Decentralised waste management system.
- Rapid scale-up to manage larger quantities of waste.
- Enhances waste management industry with promising careers.
- Empowers women to be economically independent.

### Impact
- Zero waste management and restoring natural resource.
- Reduction of GHG emissions.
- Maximum resource recovery leading to a circular economy.
- Fully formalised waste ecosystem.
- Dignified livelihood opportunities and respect for gender equality in the workplace.

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**Decision-Making Questions**

- What are the possible ways to improve the existing supply chain so as to ensure that waste management is recognised as a formal industry?
- Is and adequate budget/infrastructure allocated for resource recovery and holistic waste management?
- Why are government regulations and policies not stringently enforced?
- Are bulk waste generators, including brands and producers, compliant with waste management regulations introduced by the government?

**Inputs/Activities**

- Do our inputs/activities ensure holistic waste management services for bulk waste generators?
- For non-bulk generators, is collection via a government-appointed company adequate and meeting requirements as per regulation (e.g., segregation at source and authorised end destination)?

**Outputs**

- How can we scale-up our business model?
- Are all aspects of waste management now ready for acquiring industry status?

**Outcomes**

- Do stakeholders and workers recognise the social and environmental impact achieved?
- Will holistic waste management be an important component for a circular economy?

**Impact**

- Do all our workers have a dignified livelihood and job satisfaction?
- Have we completely transformed from waste disposal to holistic waste management so as to achieve maximum resource recovery?
- How much of social and environmental impact was achieved through holistic waste management?

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**Indicators**

- Municipal solid waste generated in India.
- Percentage of resource recovered in India.
- Percentage of informal workers engaged in resource recovery in India.

**MIS to track and monitor waste flow from source to end destination**

- Percentage of the traceable supply chain.
- Number of informal workers transitioned to the formal waste ecosystem.
- Contribution of services feeds to total revenue of the organisation.
- Frequency rate of non-fatal and fatal occupational injuries.
- Collaboration and MoUs with local authorities.
- SOP procedures which include stringent use of PPE for the staff.

**Indicators**

- Job satisfaction rate.
- Services fees component against the total budget.
- Labour workforce compliance in the SZW supply chain.
- Renumeration structure for BoP employees.
- Percentage of segregated waste received.
- MIS to track and monitor waste flow from source to end destination.

**Indicators**

- Number of employees.
- Quantity of waste managed by SZW.
- Number of contracts with customers for zero waste service.
- No gender disparity when offering compensation to the team.

**Indicators**

- Percentage of women employees at SZW.
- Percentage of resources recovered.
- Reduction in CO2 emissions.
- Total amount of waste recycled and processed.
- Percentage of workforce at SZW compliant to labour and environmental regulations.
- Number of people indirectly provided with livelihood opportunities by SZW.
II. Understanding and Describing Impact

The Impact Management Project (IMP) is a forum for building global consensus on how to measure and manage impact. Through a series of consultations and convenings across the world with thousands of practitioners including investors and multilateral institutions, IMP has developed shared fundamentals on how to describe and understand through the lens of the five dimensions of impact. These five dimensions are: WHAT, WHO, HOW MUCH, CONTRIBUTION and RISK.

- **What** tells us what outcomes the enterprise is contributing to and how important the outcomes are to stakeholders.
- **Who** tells us which stakeholders are experiencing the outcome and how underserved they were prior to the enterprise’s effect.
- **How Much** tells us how many stakeholders experienced the outcome, what degree of change they experienced, and for how long they experienced the outcome.
- **Contribution** tells us whether an enterprise’s and/or investor’s efforts resulted in outcomes that were likely better than what would have occurred otherwise.
- **Risk** tells us the likelihood that impact will be different than expected.

The Business Call to Action integrates IMP’s shared logic in the Impact Lab to help companies plan for impact measurement and management starting with assessing their outcomes considering the five dimensions described above.

SZW is contributing to five distinct outcomes: 1) **Zero waste management and natural use of resources**, 2) **Fully formalized waste ecosystem**, 3) **Dignified livelihood opportunities and respect for gender equality in the workplace**, 4) **Reduction of greenhouse gas emissions**, and 5) **Achieving a circular economy by recovering maximum value from waste**.

SZW mapped each of these effects on the **five dimensions of impact** to understand better its significance and to be able to better manage and communicate its impact.

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**Goal 1: Fully formalised waste ecosystem.**

- **What**
  - What is the importance of your goal to your stakeholders?
  - Suppliers and Producers
    - Not Important
    - Important

- **Who**
  - How underserved are your stakeholders in relation to the SDGs?
  - Suppliers and Producers
    - Underserved
    - Well-served

- **Contribution**
  - How does the impact compare to what is likely to occur anyway?
  - Because of our efforts, our stakeholders’ access to SDGs is:
    - Likely Worse
    - Same
    - Likely Better

- **How Much**
  - How significant is the impact that occurs in the time period?
    - Scale: Did the outcomes happen at scale?
      - Small Scale
      - Large Scale
    - Duration: Do the outcomes last for a long time?
      - Short Term
      - Long Term
    - Depth: Is your organization a deep driver of the outcome for these stakeholders?
      - Marginal Change
      - Deep Change

- **Risk**
  - What is the risk that the impact is not achieved due to external or internal factors?
    - Risk
      - Low Risk
      - High Risk
**Goal 2: Dignified livelihood and work which is gender equality.**

- **What**
  - What is the importance of your goal to your stakeholders?
    - Suppliers and Producers
      - Not Important
      - Important

- **Who**
  - How underserved are your stakeholders in relation to the SDGs?
    - Suppliers and Producers
      - Underserved
      - Well-served

- **Contribution**
  - How does the impact compare to what is likely to occur anyway?
    - Because of our efforts, our stakeholders' access to SDGs is:
      - Likely Worse
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- **How Much**
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      - Large Scale
    - Duration: Do the outcomes last for a long time?
      - Short Term
      - Long Term
    - Depth: Is your organization a deep driver of the outcome for these stakeholders?
      - Marginal Change
      - Deep Change

- **Risk**
  - What is the risk that the impact is not achieved due to external or internal factors?
    - Risk
      - Low Risk
      - High Risk

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**Goal 3: Zero waste management and restoring natural resource.**

- **What**
  - What is the importance of your goal to your stakeholders?
    - Suppliers and Producers
      - Not Important
      - Important

- **Who**
  - How underserved are your stakeholders in relation to the SDGs?
    - Suppliers and Producers
      - Underserved
      - Well-served

- **Contribution**
  - How does the impact compare to what is likely to occur anyway?
    - Because of our efforts, our stakeholders' access to SDGs is:
      - Likely Worse
      - Same
      - Likely Better

- **How Much**
  - How significant is the impact that occurs in the time period?
    - Scale: Did the outcomes happen at scale?
      - Small Scale
      - Large Scale
    - Duration: Do the outcomes last for a long time?
      - Short Term
      - Long Term
    - Depth: Is your organization a deep driver of the outcome for these stakeholders?
      - Marginal Change
      - Deep Change

- **Risk**
  - What is the risk that the impact is not achieved due to external or internal factors?
    - Risk
      - Low Risk
      - High Risk

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**Goal 4: Maximum resource recovery leading to a circular economy.**

- **What**
  - What is the importance of your goal to your stakeholders?
    - Suppliers and Producers
      - Not Important
      - Important

- **Who**
  - How underserved are your stakeholders in relation to the SDGs?
    - Suppliers and Producers
      - Underserved
      - Well-served

- **Contribution**
  - How does the impact compare to what is likely to occur anyway?
    - Because of our efforts, our stakeholders' access to SDGs is:
      - Likely Worse
      - Same
      - Likely Better

- **How Much**
  - How significant is the impact that occurs in the time period?
    - Scale: Did the outcomes happen at scale?
      - Small Scale
      - Large Scale
    - Duration: Do the outcomes last for a long time?
      - Short Term
      - Long Term
    - Depth: Is your organization a deep driver of the outcome for these stakeholders?
      - Marginal Change
      - Deep Change

- **Risk**
  - What is the risk that the impact is not achieved due to external or internal factors?
    - Risk
      - Low Risk
      - High Risk
3. Monitoring Performance

After developing a framework for managing its impact on the SDGs, the next step for SZW in this process was to organize its operational data and understand the gaps that could be filled by collecting new data. SZW is integrating different sources of impact data into its operations and using it to improve performance and drive business value.

SZW partnered with Upaya Social Ventures to conduct an impact study assessing the general profile of a sampling of SZW employees and establish a baseline that would help the company monitor impact on income and living standards over time. A hundred-and-nine employees were surveyed and including their household members, collectively made up 437 individuals in total.

What

- SZW is contributing to important, positive outcomes with its commitment to the circular economy and dignified livelihoods. Employees benefit from formal contracts and strict implementation of health, safety and labour laws; 94% cite being satisfied with their jobs. The planet as a stakeholder also benefits as more resources are recovered and carbon emissions are reduced.

Who

Using the Progress Out of Poverty Index (PPI) tool, SZW found that its employees had a 25% likelihood of living below USD 1.25 per day and an 83% likelihood of living below USD 2.5 per day at purchasing power parity. A typical SZW field staff’s household has three adults and two children. Formal employment allows SZW employees access to steady cashflow and the ability to repay debts and save for the future.

How Much

- SZW employees improved their incomes from USD 1.88 per day to USD 3.85 on average. For 27% of respondents, SZW is their first job and for 42% the income from SZW forms the majority of household income. For 18% of the households, income from SZW is the only source of income. Moreover, SZW has contributed to more than 1,000 jobs created indirectly.

1 The Progress out of Poverty Index® (PPI®) is an easy-to-use poverty measure developed by Grameen Foundation that allows organizations to assess and track changes in poverty rates among beneficiaries over time.
**Contribution**

- SZW managed 20,300 metric tonnes (MT) of waste in one year, out of which 4,600 MT of dry waste and e-waste was recycled, 8,400 MT of low value waste was co-processed, and 6,800 MT of wet waste was composted and converted to biogas.

**Risk**

- SZW faces some external risk such as the reduced customer base for Zero Waste Programme due to COVID-19 disruptions. However, in this case SZW quickly ramped the Extended Producer Responsibility vertical with plastic and e-waste, and continued to offer services. To implement a fully circular economy requires behaviour change and therefore SZW also faces significant risk of low stakeholder participation as the wider community is slower to adapt to a zero waste concept.

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**Lessons Learned**

Impact management helped SZW describe and articulate intended goals and performance through indicators to its investors and clients. Developing its Impact Value Chain Framework helped SZW build an impact strategy and improve operations to contribute to the SDGs. This exercise has created a process for evaluating the effectiveness of SZW’s activities on stakeholders and understand its impact footprint on the society and the environment.
Way Forward / Next Steps

Social inclusion for stimulating and dignified jobs:

Resource recovery paves the way for tremendous job opportunities. SZW will partner and work with entrepreneurs, managers and field teams (including from the informal waste sector) who will contribute to meeting the environmental and social targets as outlined in the Impact Value Chain relating to reducing poverty, providing decent work and building sustainable cities.

Demonstrate de-centralised works:

SZW’s medium to small materials recovery facilities in urban and rural areas are aggregating and channelling all dry waste into further sorting, recycling and processing. SZW will also work with campuses, small towns and villages to implement local composting and bio-methanation as solutions to recover resources from organic waste.

Technology that supports efficiency and environment:

SZW will introduce technology to bring in better efficiency, support traceability and safety and address environmental concerns. In the coming years, SZW hopes to build a movement with more stakeholders working towards holistic waste management and resource recovery that is inclusive and does not lose sight of our planet’s boundaries.